Completed Pollution Prevention Project Case Study

United States Department of Energy
Office of Environmental Management
Fact Sheet

Vacuum Pump Recycling

Los Alamos National Laboratory

Original Problem

Old vacuum pumps and other unusable metal equipment items were being stored in various locations at LANSCE. The items were taking up valuable space, but disposing of all the equipment as suspect low level or mixed low level waste was going to be very expensive.

The Project Solution

An intensive recycling effort was undertaken. Over 100 vacuum pumps were collected from TA-53, and all of the usable pumps and parts were salvaged. All oil, liquids, and RCRA components, such as mercury switches, were removed from the pumps. Then the pumps were sent to the GTS Duratek metal melt facility in Oak Ridge, Tennessee where they could be melted and formed into shielding blocks for use by DOE facilities. The success of the vacuum pump recycling prompted LANSCE to recycle other unusable metal-containing items as well.

Value of Improvement

Lots of old vacuum pumps and other metal items were removed from TA-53. Recycling some of the equipment instead of treating all of it as suspect low level or mixed low level waste saved about $265,000 and 865 cubic feet of low level waste landfill space at TA-54.

Lifecycle Waste Reduction	
Lifecycle Waste Reduction	865 cubic feet
Commencement Date	1999
Project Useful Life (Years)	NA

DOE Monetary Benefits	
Total Project Cost	NA
Lifecycle Savings	$265,000
Return on Investment	NA

Benefits At-A-Glance

- Usable vacuum pumps and parts were identified and salvaged, and TA-53 storage areas were cleaned.
- Removing RCRA components from the metal equipment allowed the metal to be recycled into shielding blocks.
- Recycling reduced the amount of waste that would have been created by disposing of the old equipment.

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Summary Data	
Priority Area:	Waste Minimization Projects
Project Type:	Recycling
Total Project Cost:	NA
Lifecycle Savings:	$265,000 (one-time savings)
Implementing Groups:	LANSCE-7, E-ER, FWO-SWO, LANSCE-FM, LANSCE - ESH-1
Benefiting Group:	LANSCE-7
Useful Life Years:	NA
Return on Investment:	NA
Lifecycle Waste Reduction:	865 cubic feet of metal was recycled.
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